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ABSTRACT

In March 1984, a study was conducted to estimate the tangible, positive economic impact that community colleges in Kansas have both on their local economies and on the state economy. The model used in the study calculated a conservative estimate of the economic impact associated with direct expenditures by the colleges, their employees, and their students, as well as additional indirect business volume generated by these direct expenditures. Study results included the following: (1) total tangible economic impact statewide was $318,947,857; (2) total net economic impact after taxes was $244,127,489; (3) college expenditures totalled $39,732,145, while employee expenditures were $23,558,275 and student expenditures were $64,288,723; (4) the direct impact of the colleges represented $127,579,143 of the total impact, while the additional business volume generated by these expenditures was $191,368,714; (5) the net economic impact of the community colleges on their surrounding counties ranged from $3.6 million to $23.7 million; (6) for each dollar of local tax support received, community colleges returned $4.30 to the local economies; (7) the community college employed 2,352 individuals directly in full-time positions in 1983-84; and (8) overall, student expenditures accounted for 58% of the direct impact of the community colleges. (LAL)

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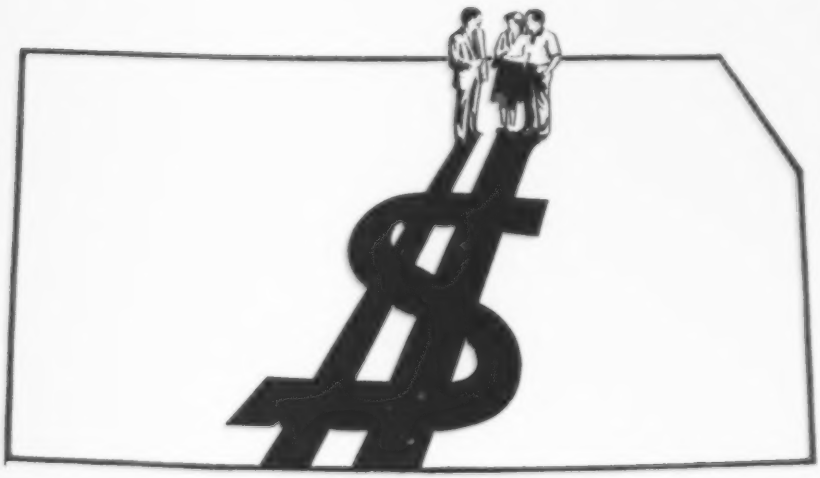
The Economic Impact of the Kansas Community Colleges on the Counties and State of Kansas Fiscal 1983-84



A Research Report Sponsored by

The Kansas Council of Community College Presidents

January, 1985

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Office of Institutional Research
Johnson County Community College

JC 850 562

THE ECONOMIC IMPACT OF THE KANSAS COMMUNITY COLLEGES ON THE COUNTIES AND STATE OF KANSAS

A Research Report Sponsored by
the Kansas Council of
Community College Presidents

January, 1985

Office of Institutional Research
Johnson County Community College

PREFACE

Economic impact studies are by their nature rather complex and somewhat theoretical. This report attempts to summarize the results of this study of the economic impact of the Kansas community colleges in non-technical terms. Nonetheless, the report contains sufficient detail to document the methodology and results of the study should these be of interest.

The report is divided into three major sections plus appendices:

The "Introduction" provides the context for the study, including both a rationale and an assessment of its limitations.

The section, "Summary of Results," is intended to be a self-contained summary of the study. It includes both the major results and a brief explanation of the model used to calculate these results. **This section is recommended to those who are primarily interested in a concise overview of the study and its results.**

The "Methodology of the Study" explains the study in greater detail, including the background of the model used, data sources, calculations and definitions of terms. It is intended for those interested in the more technical aspects of the study.

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ACKNOWLEDGEMENTS

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In addition, numerous individuals at the community colleges assisted in the data collection required for the study to be successful: Philip E. Arnold, Clyde L. Fitch, Larry Fowler, Dr. James R. Grote, Ed Hargrove, Orville P. Kliewer, Paul E. Maneth, Robert Prater, Donald L. Porter, Doug Radohl, Mary Roberts, Carolyn Sinn, Jim Stratford, Dr. Charles Van Middlesworth and Roger Willmarth.

Special acknowledgement needs to be made of the contribution of Dr. John Hanna, Specialist, Community College Section, Kansas State Department of Education for his efforts in locating important data from various federal and state sources.

Finally, the study is greatly indebted to Dr. G. Jeremiah Ryan, currently Vice President for Institutional Advancement, Monroe Community College, Rochester, New York, for his generous assistance to the researchers. Dr. Ryan developed the model and formulated many of the procedures used in the study while Research and Development Officer at Brookdale Community College in New Jersey, and he provided invaluable consultation to the researchers in adapting the model for use in Kansas.

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INTRODUCTION

In March, 1984, the Kansas Council of Community College Presidents commissioned the Office of Institutional Research at Johnson County Community College to conduct a study of the economic impact of their colleges on the State of Kansas. The following is the report of that study.

Rationale

The Kansas community colleges identify in their individual mission statements the educational outcomes that they intend their efforts to produce. These products are most often benefits to students, such as preparation for academic studies leading to a bachelor's degree, preparation for employment in skilled jobs and career positions, and general educational and personal development. Also, benefits to the local community, such as a skilled workforce, technical expertise required by local agencies and businesses, and cultural and recreational enrichment are commonly mentioned as intended results of community college efforts. These are the most important reasons for which community colleges exist, and the success of these institutions is appropriately measured by their ability to produce these fundamental educational and community service benefits.

However, in addition to providing educational benefits, community colleges also provide major economic benefits to their communities. Some of these benefits are significant but impossible to measure -- for instance, it is nearly impossible to place a dollar value on the economic benefit derived from having a trained and educated workforce available for local businesses, or the value of the drawing power and contribution to a community's economic development resulting from the existence of a college in the community. Nonetheless, many of the economic benefits provided by a community college to the local community are tangible, and their value is possible to estimate.

It was the purpose of this study to estimate the tangible, positive economic benefits, or impact, that community colleges have on both their local economies and on the economy of the State of Kansas.

Economic Impact Studies

Since the early 1970's, numerous studies have been conducted to estimate the impact that institutions of higher education have on the communities in which they are located. Several models have been developed to conduct such studies, but most are related to the economic impact model developed by Caffrey and Isaacs in 1971 under the sponsorship of the American Council on Education.

The model used in this study is one developed for community colleges and implemented in a statewide study of the Community College of New Jersey by Ryan in 1983. The Ryan-New Jersey model was selected for use for three reasons: because it represents the mainstream of economic impact models; because it simplifies data collection required for individual colleges by relying on available federal, state and local data sources -- and thus increasing reliability among institutions; and because it was developed specifically to be used for studies of statewide systems of community colleges.

Limitations of the Study

There are limitations common to all economic impact studies, and some that are specific to this study of the economic impact of the Kansas community colleges.

All economic impact studies can provide only defensible estimates of the impact of any institution on the geographical area in which it is located. The results of this study are only estimates of the economic impact of its community colleges on the counties and the State of Kansas.

In addition, this particular study, and the Ryan-New Jersey model in general, was constructed in such a way as to guarantee a very conservative estimate of the economic impact of the Kansas community colleges. Because the study attempted to use a common model for all nineteen community colleges in the state, it was unable to accommodate the sometimes substantial differences that exist among them. As a result, estimates were made only for those components of economic impact that were common for all Kansas community colleges, and for which data were readily available to all colleges.

Specifically, the model used in this study estimates only four major components of an institution's tangible economic impact: the economic impact of the direct expenditures of the college, the direct expenditures of college employees, the direct expenditures of college students, and the indirect business volume generated by these expenditures.

The Ryan-New Jersey model does not attempt to measure the economic impact of lesser but significant components, such as the expansion of local banks' credit base by college-related deposits, increases in sales and property taxes collected by local governments due to college-related expenditures, college employees' investments in local property, expenditures by out-of-county/state visitors to college-related activities or events, and numerous other tangible but difficult to measure impacts. Thus the estimates made by this study were by their nature quite conservative.

Conservative Bias of the Study

Estimates of economic impacts made in this study were also conservative in that in all cases where a choice among equally justifiable alternatives was required, the most conservative estimate was made.

For instance, full-time student expenditures were estimated using the most conservative figures available (the federal financial aid guidelines for a dependent student living at home) for all students, while part-time student expenditures were estimated including only those for books and supplies and transportation to and from classes. Similarly, a review of previous studies indicated that multipliers for estimating the indirect effect of college-related expenditures on generating additional business volume ranging from 1.9 to 3.0 are commonly used for geographic areas as a large as a county. However, the conservative multiplier of 2.0, suggested by the Ryan-New Jersey model, was used in this study.

So, both the nature of the model and the inclinations of the researchers assured that estimates made of the tangible economic impact of community colleges on the counties and State of Kansas were quite conservative.

SUMMARY OF RESULTS

The model used in this study calculates a conservative estimate of the economic impact associated with the following components of college-related economic activity:

1. direct expenditures by the college
2. direct expenditures by college employees
3. direct expenditures by college students
4. additional indirect business volume generated by these direct expenditures

Summing these components provides an estimate of the tangible economic impact of a community college on the geographical area or areas in which it is located.

In this study, the economic impact of each of the nineteen Kansas community colleges on the county in which each is located (and whose taxpayers support the college) was calculated. Then, the impact of each community college on its larger community, the State of Kansas, was also calculated, making the necessary adjustments for the larger geographical area. Finally, the sum of these nineteen impacts was calculated, and this sum was determined to be the total tangible economic impact of the Kansas community colleges on the State of Kansas.

Total Tangible Economic Impact on Kansas

The **total tangible economic impact** of its community colleges on the State of Kansas in fiscal year 1983-84 was calculated to be the following:

(a) **$ 318,947,857**

Figure 1 displays these results.

Table 1 details the contribution of each community college to this total impact on the state, as well as the total impact of each college on the county in which each is located.

It is important to note that community colleges also receive substantial support from taxpayers, both in the form of local or county taxes and in state taxes. According to figures provided by the State Department of Education, in fiscal 1983-84 community colleges received the following **total in state and local taxes**:

(b) **$ 74,820,370**

Subtracting these taxes (b) from the calculated total tangible economic impact (a) provided the **total net economic impact** of the Kansas community colleges on the state in fiscal 1983-84:

(c) **$ 244,127,487**

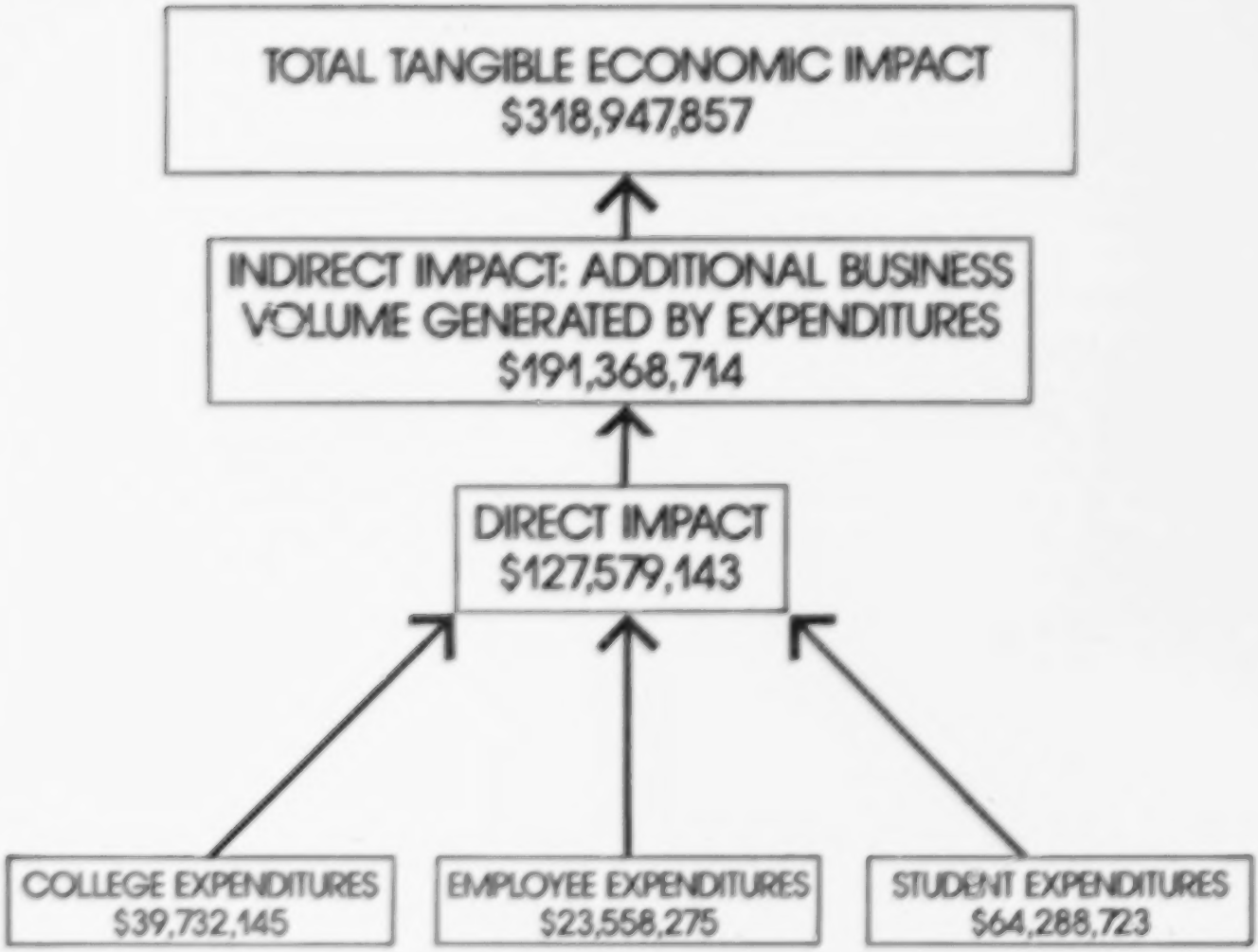

Figure I. Total Tangible Economic Impact of the Kansas Community Colleges on the State of Kansas

Table 1

TOTAL TANGIBLE ECONOMIC IMPACT OF THE
KANSAS COMMUNITY COLLEGES ON THE COUNTIES IN WHICH THEY ARE LOCATED
AND ON THE STATE OF KANSAS
FISCAL 1983-84

Community College	County Located	Total Economic Impact on County	Total Economic Impact on Kansas
Allen CCC	Allen	$ 4,474,701	$ 6,624,371
Barton CCC	Barton	10,626,947	16,410,221
Butler CCC	Butler	17,632,605	26,599,958
Cloud CCC	Cloud	7,304,539	11,576,288
Coffeyville CC	Montgomery	7,342,760	10,605,324
Colby CC	Thomas	8,137,784	12,002,119
Cowley CCC	Cowley	7,947,966	13,242,353
Dodge City CC	Ford	11,685,730	15,971,936
Fort Scott CC	Bourbon	9,415,062	13,155,739
Garden City CC	Finney	8,967,925	14,523,754
Highland CC	Doniphan	4,634,381	8,131,475
Hutchinson CC	Reno	20,812,761	28,434,541
Independence CC	Montgomery	6,598,604	10,124,029
Johnson CCC	Johnson	37,259,386	50,236,257
Kansas City CC	Wyandotte	21,270,528	29,483,004
Labette CC	Labette	10,477,315	13,905,064
Neosho CCC	Neosho	5,415,761	7,757,762
Pratt CC	Pratt	12,313,493	17,561,354
Seward CCC	Seward	9,084,208	12,602,309
TOTAL		$221,402,456	$318,947,857

Total Tangible Economic Impact of Community Colleges on the State of Kansas, Fiscal 1983-84	$318,947,857
Total State and Local Tax Support Received by Kansas Community Colleges, Fiscal 1983-84	$ 74,820,370
Total Net Economic Impact on Kansas, Fiscal 1983-84	$244,127,487

Economic Impact on Counties

Table 2 details the economic impact of the presence of a community college in each of the counties in which one is located. (The impact of each of the colleges in Montgomery county was calculated separately.) The net economic impact on each county was calculated by subtracting local taxes paid to support the community college from the conservative estimates of the total tangible impact provided by each.

As Table 2 documents, **the net economic impacts on the counties ranged from $3.6 to $23.7 million per year.**

Return on Investment

In addition to the net economic impact, it was possible to calculate the return on the investment in community colleges received both by local taxpayers and the State of Kansas.

Table 2 details the initial investment of local taxpayers in the community college located in their respective community, that is, the local taxes paid to support their college. The ratio of the total economic impact on the county to the local taxes paid is a measure of each county's taxpayers' return on their investment.

Overall, this ratio was 4.3 to 1.0, that is, **for each dollar of local tax support received, community colleges returned $4.30 to the economies of the counties in which they are located.** This ratio ranged from approximately 9:1 to about 3:1. In general, the ratio was greater for smaller community colleges in less populated counties, while the absolute dollar return was greater for larger community colleges in more populated counties.

The proportionate return on the investment of the State of Kansas in community colleges was even greater, primarily because the State invested less than half as much as local governmental entities in community colleges. **On an investment of $23,425,879** (total state support received by Kansas community colleges in fiscal 1983-84), **the State of Kansas received tangible economic benefits of $318,947,857 -- a return on investment of approximately 13.6 to 1.0.** This ratio was similar to those found for state systems of community colleges in New Jersey, Virginia, Maryland, Washington, Illinois and Michigan.

So, for every dollar spent by the State of Kansas in support of community colleges, $13.60 was returned to the State's economy -- and this figure does not include the educational, service or intangible economic benefits provided by this investment.

Full-time Jobs Related to Community College Spending

The Kansas community colleges employed directly 2,352 individuals in full-time positions during fiscal 1983-84. In addition to these jobs, direct college-related expenditures and the additional indirect business volume generated by it in the

Table 2

TOTAL AND NET ECONOMIC IMPACT OF KANSAS COMMUNITY COLLEGES
ON THE COUNTIES IN WHICH THEY ARE LOCATED
FISCAL 1983-84

Community College	County Located	Total Economic Impact on County	Local Taxes Paid to Support Community Colleges	Net Economic Impact on County
Allen CCC	Allen	$ 4,474,701	$ 794,946	$ 3,679,755
Barton CCC	Barton	10,626,947	3,000,187	7,626,760
Butler CCC	Butler	17,632,605	2,584,577	15,048,028
Cloud CCC	Cloud	7,304,539	920,183	6,384,356
Coffeyville CC	Montgomery	7,342,760	1,625,307	5,717,453
Colby CC	Thomas	8,137,784	1,258,396	6,879,388
Cowley CCC	Cowley	7,947,966	2,082,538	5,865,428
Dodge City CC	Ford	11,685,730	3,367,678	8,318,053
Fort Scott CC	Bourbon	9,415,062	1,093,105	8,321,957
Garden City CC	Finney	8,967,925	3,214,613	5,753,311
Highland CC	Doniphan	4,634,381	987,704	3,646,677
Hutchinson CC	Reno	20,812,761	4,293,254	16,519,507
Independence CC	Montgomery	6,598,604	1,686,328	4,912,277
Johnson CCC	Johnson	37,259,386	13,528,055	23,731,331
Kansas City CC	Wyandotte	21,270,528	4,495,507	16,775,021
Labette CC	Labette	10,477,315	1,503,740	8,973,575
Neosho CCC	Neosho	5,415,761	1,238,946	4,176,814
Pratt CC	Pratt	12,313,493	1,516,870	10,796,623
Seward CCC	Seward	9,084,208	2,202,559	6,881,649
TOTAL		$221,402,456	$51,394,492	$170,007,964

economy created additional employment. Economists estimate that .00007 full-time jobs are created by each dollar added directly to an economy. Spending related to Kansas community colleges, then, generated an additional 8,931 full-time jobs.

The total full-time jobs in Kansas that can be attributed to the nineteen community colleges was the sum of the actual number of full-time positions in these colleges and the number generated by direct expenditures of the college, its employees and its students. **Thus, Kansas community colleges generated 11,192 full-time jobs in Kansas in 1983-84.**

Components of Economic Impact

As has been discussed in the introduction to this report, the model used in this study calculates a conservative estimate of the tangible economic impact of a college on the geographical areas in which it is located by summing the direct expenditures of the college, its employees and its students, and then adding to this sum a calculation of the indirect business volume generated by these direct expenditures. (This indirect business volume is estimated by a "multiplier," and it is explained in more detail on page 21 of this report.)

Tables 3 and 4 detail the components of the economic impact calculated for each community college on the county in which each is located and on the State of Kansas.

On the average, over half (58.0 percent) of the direct impact of the community college on the county was attributed to expenditures by students; about one quarter (25.8 percent) was attributed to expenditures by the college, and the remaining 16.2 percent to expenditures by college employees.

A conservative estimate is that for every dollar of direct expenditures made into the economy of a geographical area the size of a county, total business volume of two dollars is generated -- the effect of dollars being recycled in the economy. Thus, direct expenditures related to the presence of a Kansas community college accounted for only one-half of its total tangible economic impact on its county's economy. The indirect business volume generated by these expenditures accounted for the remaining half.

For the state, half (50.4 percent) of the direct economic impact of community colleges resulted from student expenditures, 31.1 percent from expenditures by the college, and 18.5 percent from expenditures by college employees. The total economic impact of community colleges on Kansas was calculated as 2.5 times direct expenditures; therefore, the indirect business volume generated by these direct expenditures in a geographical area the size of Kansas accounted for 60 percent of the total economic impact.

Figure 2 displays the percentage distribution of the components of the direct economic impact of the Kansas community colleges.

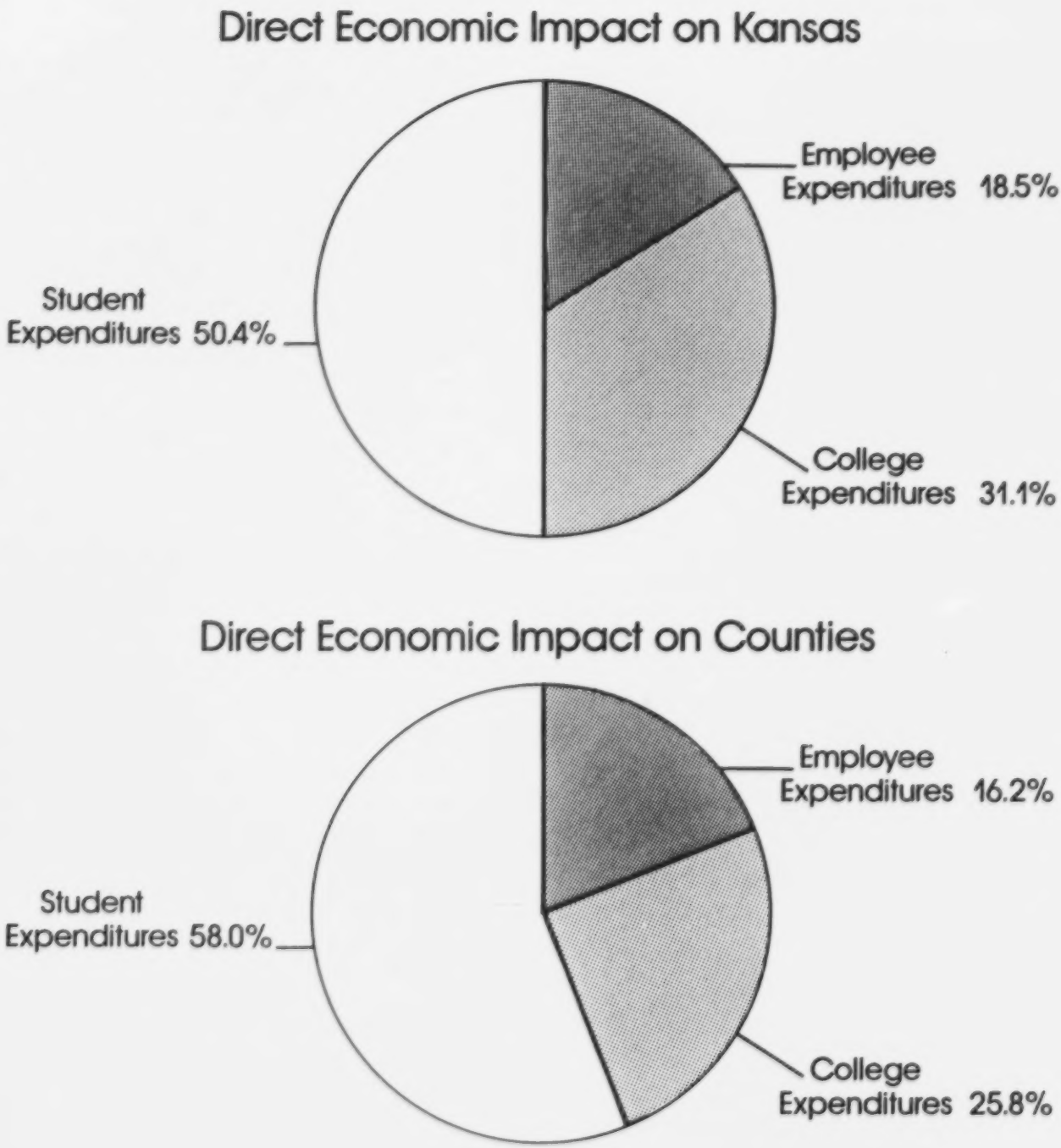

Figure 2. Percentage Distribution of Direct Impact of Community College Spending

Table 3

COMPONENTS OF THE TOTAL TANGIBLE ECONOMIC IMPACT
OF THE KANSAS COMMUNITY COLLEGES ON THE COUNTIES IN WHICH THEY ARE LOCATED
FISCAL 1983-84

Community College/ County Located	Direct Impacts			Indirect Impact	Total Tangible Economic Impact on County
	College Expenditures	Employee Expenditures	Student Expenditures		
Allen CCC/Allen	$ 258,219	$ 241,771	$ 1,737,360	$ 2,237,351	$ 4,474,701
Barton CCC/Barton	1,248,952	948,271	3,116,250	5,313,473	10,626,947
Butler CCC/Butler	1,696,018	1,614,029	5,506,255	8,816,303	17,632,605
Cloud CCC/Cloud	640,568	398,702	2,613,000	3,652,270	7,304,539
Coffeyville CC/Montgomery	1,345,413	499,467	1,826,500	3,671,380	7,342,760
Colby CC/Thomas	855,022	613,670	2,600,200	4,068,892	8,137,784
Cowley CCC/Cowley	972,140	438,843	2,563,000	3,973,983	7,947,966
Dodge City CC/Ford	2,504,215	1,177,250	2,161,400	5,842,865	11,685,730
Fort Scott CC/Bourbon	1,418,151	680,630	2,608,750	4,707,531	9,415,062
Garden City CC/Finney	1,006,762	1,094,992	2,382,208	4,483,962	8,967,925
Highland CC/Doniphan	239,170	158,621	1,919,400	2,317,191	4,634,381
Hutchinson CC/Reno	2,519,408	1,810,220	6,076,752	10,406,380	20,812,761
Independence CC/Montgomery	546,895	991,847	1,760,560	3,299,302	6,598,604
Johnson CCC/Johnson	5,367,330	3,106,895	10,155,468	18,629,693	37,259,386
Kansas City CC/Wyandotte	2,349,153	2,146,551	6,139,560	10,635,264	21,270,528
Labette CC/Labette	887,978	420,079	3,930,600	5,238,658	10,477,315
Neosho CCC/Neosho	861,468	474,212	1,372,200	2,707,880	5,415,761
Pratt CC/Pratt	2,478,315	535,371	3,143,060	6,156,746	12,313,493
Seward CCC/Seward	1,337,554	528,350	2,676,200	4,542,104	9,084,208
TOTAL	$28,532,731	$17,679,774	$64,288,723	$110,701,228	$221,402,456

Table 4

COMPONENTS OF THE TOTAL TANGIBLE ECONOMIC IMPACT
OF THE KANSAS COMMUNITY COLLEGES ON THE STATE OF KANSAS
FISCAL 1983-84

Community College	Direct Impacts			Indirect Impact	Total Tangible Economic Impact on Kansas
	College Expenditures	Employee Expenditures	Student Expenditures		
Allen CCC	$ 502,093	$ 410,296	$ 1,737,360	$ 3,974,623	$ 6,624,371
Barton CCC	1,800,042	1,647,797	3,116,250	9,846,133	16,410,221
Butler CCC	3,237,024	1,896,704	5,506,255	15,959,975	26,599,958
Cloud CCC	1,168,732	848,784	2,613,000	6,945,773	11,576,288
Coffeyville CC	1,843,031	572,599	1,826,500	6,363,195	10,605,324
Colby CC	1,298,367	902,281	2,600,200	7,201,271	12,002,119
Cowley CCC	1,945,816	788,126	2,563,000	7,945,412	13,242,353
Dodge City CC	2,820,840	1,406,535	2,161,400	9,583,162	15,971,936
Fort Scott CC	1,828,668	824,878	2,608,750	7,893,444	13,155,739
Garden City CC	1,948,572	1,478,721	2,382,208	8,714,252	14,523,754
Highland CC	871,261	401,930	1,919,400	4,878,885	8,131,475
Hutchinson CC	2,862,358	2,434,706	6,076,752	17,060,724	28,434,541
Independence CC	1,184,939	1,104,112	1,760,560	6,074,417	10,124,029
Johnson CCC	6,437,941	3,501,094	10,155,468	30,141,754	50,236,257
Kansas City CC	3,279,949	2,373,692	6,139,560	17,689,803	29,483,004
Labette CC	964,528	666,897	3,930,600	8,343,039	13,905,064
Neosho CCC	1,036,259	694,646	1,372,200	4,654,657	7,757,762
Pratt CC	3,175,341	706,140	3,143,060	10,536,813	17,561,354
Seward CCC	1,526,385	838,338	2,676,200	7,561,385	12,602,309
TOTAL	$39,732,145	$23,558,275	$64,288,723	$191,368,714	$318,947,857

The Ryan-New Jersey Model

The economic impact model used in this study was adapted by Ryan, after an exhaustive review of previous economic impact studies, and implemented in New Jersey in 1983. It is different from previous models in that it greatly reduces the complexity of the sub-models and simplifies the data collection process. Thus, it is well-suited for use with statewide systems of community colleges that include numerous and diverse institutions. Ryan has also demonstrated that results derived using this simplified model are comparable to those derived using the more generic Caffrey and Isaacs model, the acknowledged parent of economic impact models for institutions of higher education, and its various adaptations.

The Ryan-New Jersey model includes three major components of the estimated direct economic impact of a community college on the county or state in which it is located:

1. direct expenditures of the college in-county/in-state
2. direct expenditures of college employees in-county/in-state
3. direct expenditures of college students in-county/in-state

In addition to the direct economic impact of these expenditures, the model assumes that the indirect economic impact resulting from the additional business volume generated by these direct expenditures can be estimated by a multiplier that depends upon the size of the geographical area of interest -- in this case, either a county or the state. So the basic formula of the Ryan-New Jersey model used in this study is as follows:

Total in-county/in-state expenditures
by the college

PLUS

Total in-county/in-state expenditures
by college employees

PLUS

Total in-county/in-state expenditures
by college students

TIMES

A multiplier (2.0 for a county; 2.5 for the state) to account for additional business volume generated

EQUALS

TOTAL ECONOMIC IMPACT

Figure 3 depicts the major components of this model.

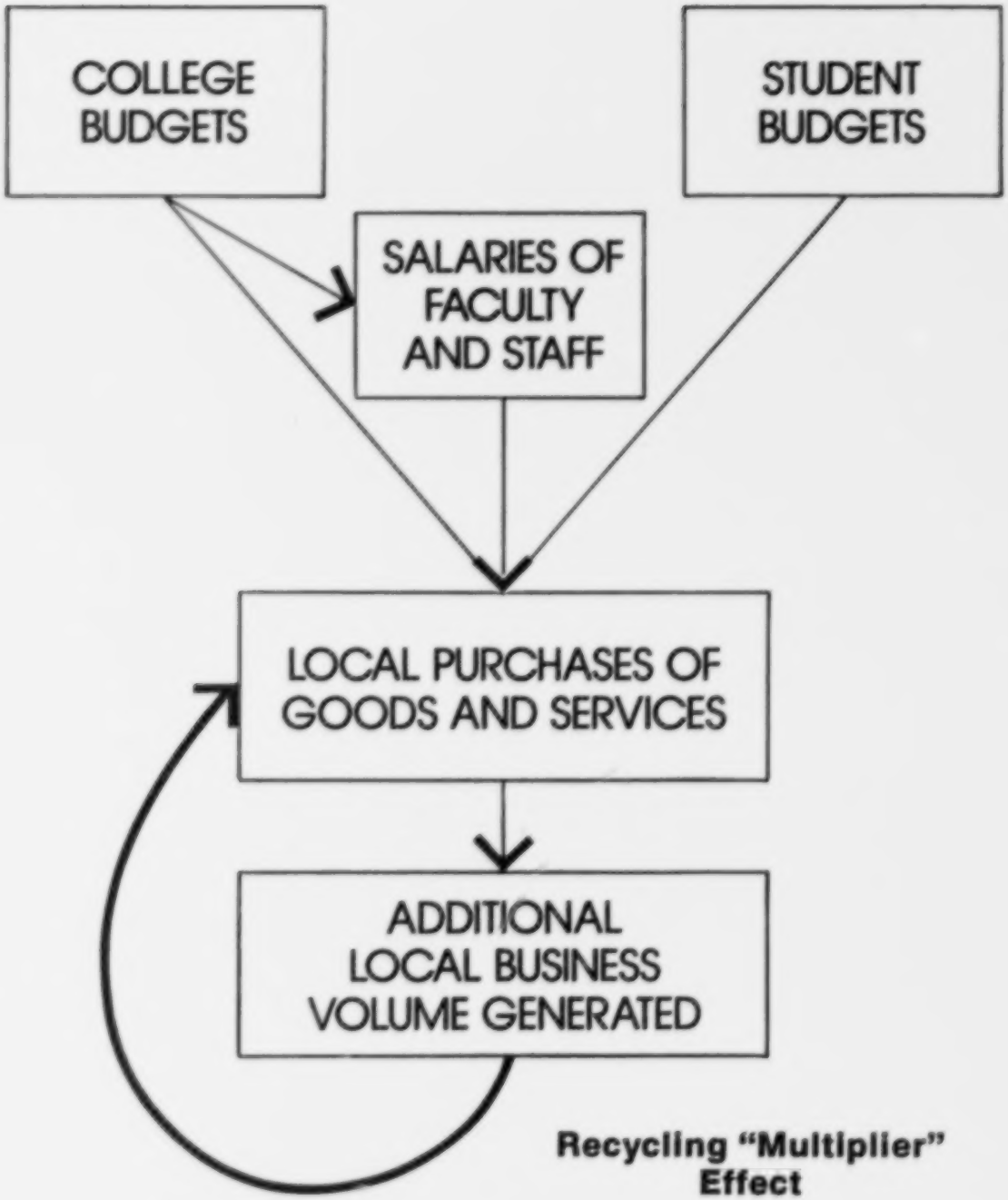

Figure 3. Basic Components of An Economic Impact Model

The simplification of more complex models that characterizes the Ryan-New Jersey model used in this study is accomplished primarily by using existing data from federal, state and local sources to substitute for surveys of college employees and students and to replace the extremely complex "retail gravity model" that is commonly used to estimate the percentage of expenditures made by employees or students in a specified geographical area.

For instance, rather than surveying college employees to determine how many rented their residences, how much they spent on non-housing items, and how much they spent on non-housing items in the county of their residence, existing data sources were used. The percentage of college employees who rented was assumed to be the same as the county average, and this average and average county rents were available from the Center for Public Affairs at the University of Kansas (see Table C). The percentage of disposable income that college employees spent on non-housing items was assumed to be the same as regional averages for metropolitan and non-metropolitan areas; these data were available from the Bureau of Labor Statistics (see Table A). Estimates of the percentage of expenditures that college employees spent in-county were inferred from a Kansas Department of Economic Development study that suggested that the ratio of retail sales to effective buying income could be used to provide such an estimate (see Table B). In these and other instances, the study used existing data to provide defensible estimates while avoiding the difficulties, expense and potential lack of reliability common to the alternative method of collecting these data, survey research.

Other examples and explanations of the data used in this study are contained in the following sections on "Methods and Data Sources" and "Definitions." In addition, Appendix 2 contains the detailed worksheets used to calculate the results of the study according to the Ryan-New Jersey model.

Methods and Data Sources

After careful review of the literature on previous economic impact studies, the Ryan-New Jersey model was selected as the most appropriate and manageable for the study. The data elements required from each community college were identified, and a survey instrument was developed to collect these data. After all community colleges provided the requested data, these were verified for accuracy and consistency. The survey instrument is contained in Appendix 1, and the data collected from each college that were then used to calculate the results of the study are contained in the worksheets in Appendix 2. (Data collected by the survey instrument are noted as "SQ#__" in the "Source/Formula" column of the worksheet.)

Additional data requirements were identified, and their likely sources sought. The State Department of Education located necessary data available from federal and state sources. Data collected from these sources are contained in Tables A - D in Appendix 3, and these are noted in the worksheets in Appendix 2.

After collecting and verifying the required data, calculations of the economic impact of each Kansas community college on the county in which each is located and on the State of Kansas were made according to the Ryan-New Jersey model. The sum of the impacts of each community college was calculated, and this was determined to be the total economic impact of its community colleges on the State of Kansas. These calculation are specified in the worksheets in Appendix 2.

Definitions

Critical to the consistent application of the model for all nineteen community colleges were common definitions of key terms. The survey instrument contained in Appendix 1 defined the data collected from the colleges, including suggested common sources for them. The following are explanations of the general components of the model:

Direct Expenditures of the College: This included all of the expenditures of the college made to business and other contractors for such items as supplies, utilities, materials, equipment, building projects, services and numerous other items, excluding payments made to employees, taxes, or other such items as debt retirement. The location (in-county, out-of-county, in-state, out-of-state) of these expenditures was determined by the address of each vendor.

Direct Expenditures of College Employees: This component of the model was determined by calculating the total disposable income of college employees by summing all payments made by the college to them, excluding taxes withheld and mandatory deductions, such as KPERS. Then, the percentage of this total disposable income of college employees spent on non-housing items in-county and in-state was calculated for those who were residents of the county/state. To this was added the in-county and in-state expenditures of non-resident, full-time employees of the college -- estimated at a very conservative constant of $1,000 per year. Finally, the housing rental expenditures of resident, full-time employees were calculated and added to the total.

Payments by full-time employees for home mortgages and related interest and taxes were considered investments and not included in the calculation of college employees' expenditures. Also, expenditures of part-time employees of the college who were neither residents of the county nor the state were excluded from the figure, and only a token amount was included for the expenditures of non-resident, full-time employees. As a result, this calculation provided a very conservative estimate of the expenditures of college employees, and only considered those that were derived from salaries actually paid by the college.

Direct Expenditures of College Students: Student expenditures were estimated for only those activities related to their attendance at the college, excluding payments made for tuition and fees.

For full-time students (12 credit hours or more), who were assumed to reside in the county and state because they were students, these expenditures included those for books, college-related supplies, transportation and a living allowance for room and board. Rather than depending upon surveys of students to determine average expenditures for these items, the most conservative figures available, the federal financial aid guidelines for a full-time student living at home as a dependent of his or her parents, were used. These guidelines are developed and approved for each college disbursing federal financial aid monies.

For part-time students (assuming an average of 6 credit hours), only those costs for books, college-related supplies and transportation to and from classes were included as college-related expenditures. After examining various estimates for such expenses, including previously conducted surveys and federal guidelines, part-time student expenditures for 9 months (two semesters) were estimated as $750 for students in urban areas and $1,000 for students in rural districts, assuming increased average transportation costs. Again, these calculations were quite conservative.

The Multiplier

The multiplier is an indispensable feature of all economic impact models. It is used to estimate the indirect business volume that is generated as a result of direct expenditures made into the economy of a specified geographical area. It is a key concept because its effect generally constitutes 50 percent or more of the total economic impact calculated by such models.

For an area the size of a state, the following scenario explains the concept of the multiplier. For each dollar of initial spending in the state's economy, approximately $.75 is respent within the state by businesses and individuals for goods and services from other in-state businesses and individuals. The balance is removed from the economy by taxes, savings and spending for goods and services made out-of-state. But this is only the first round of transactions. The income accruing to state residents from this round of transactions is partially respent within the state's economy. Again, some is saved, paid out in taxes and spent outside the state; but on the average, $.50 remains in the state's economy. This recycling process continues with diminishing increments at each cycle. Eventually, the ratio of total spending to initial, direct expenditures can be estimated to be approximately 2.5 to 1.0.

Figure 4 provides a graphic representation of the recycling process that forms the basis for the concept of the multiplier.

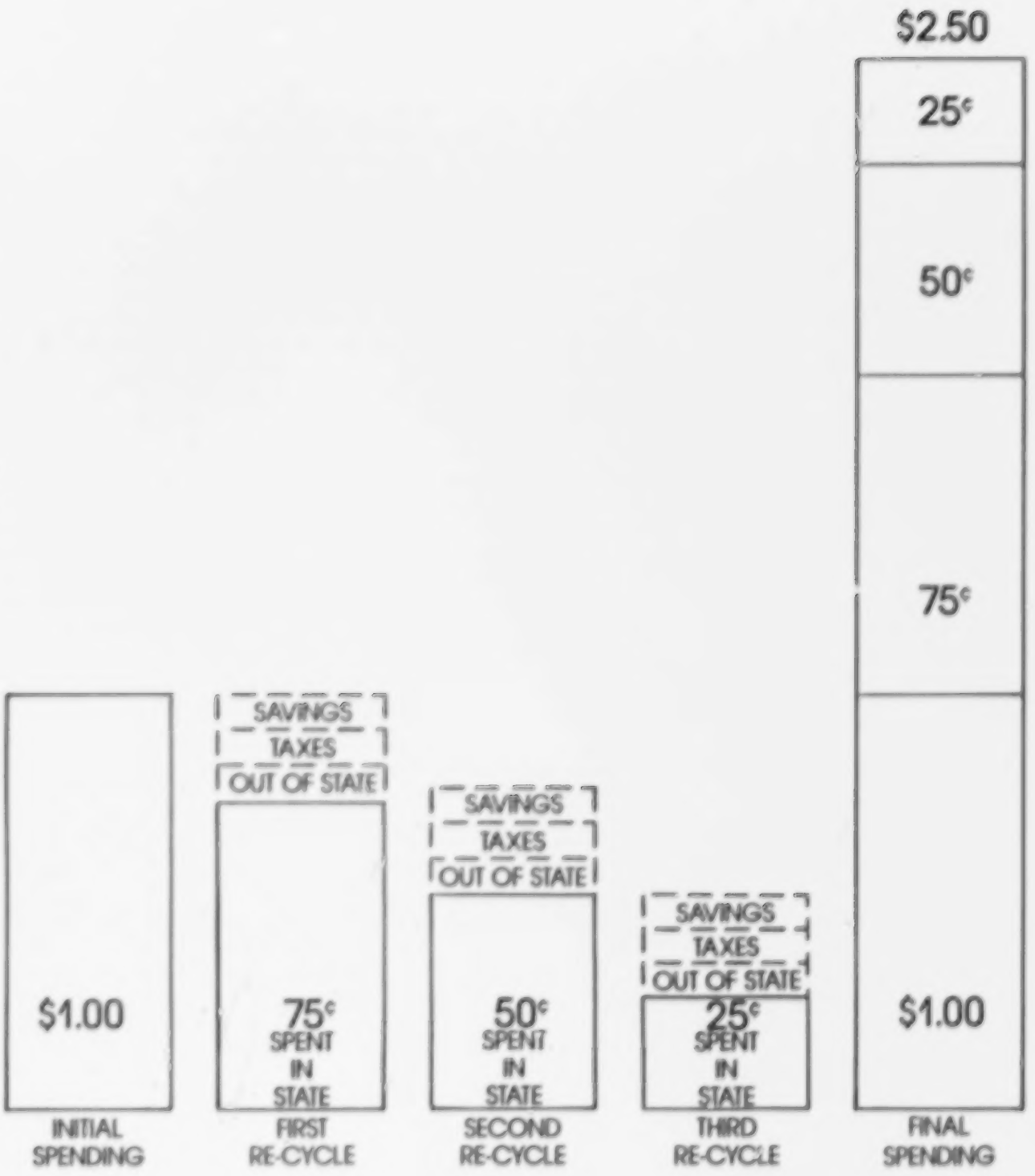

Figure 4. How the Multiplier Works

For an area the size of a state, estimates of the multiplier made in the literature and used in other studies range from 2.0 to 4.0. The estimate of 2.5 used in this study was conservative, especially in light of the relative self-sufficiency of the Kansas economy. However, it was the multiplier recommended by the Ryan-New Jersey model.

For an area the size of a county, smaller multipliers are used because the leakage of dollars out of a county's economy must be assumed to be greater than for a state. Other studies concerned with geographical areas the size of counties use multipliers ranging from 1.9 to 3.0. This study used the relatively conservative multiplier 2.0, also recommended by the Ryan-New Jersel model.

For additional explanation of the model used in this study and of economic impact studies in general, refer to the short list of references provided in Appendix 4. Ryan's (1984) Fellowship Project for the League for Innovation in the Community College contains a comprehensive bibliography of economic impact studies in community colleges.

Appendix 1

KANSAS COMMUNITY COLLEGE
ECONOMIC IMPACT STUDY SURVEY:

INSTITUTIONAL IDENTIFICATION

1. Institution: _____

2. Address: _____

3. Contact Person: _____

4. Title _____

5. Work Phone: (_ _ _) _ _ _ - _ _ _ _ ext. _____

6. County in which institution is located:

_____

7. Counties which make up the service area of the institution*:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

* List all counties which are defined by the State Board of Education to make up the service area of the college, including parts of counties.

KANSAS COMMUNITY COLLEGE
ECONOMIC IMPACT STUDY SURVEY:

DATA REQUIREMENTS

The following college information is required in order to calculate the economic impact of a community college on its county, its service area, and of the Kansas community colleges on the State of Kansas:

Information Required	Directions/Source of Information
1. College expenditures _____	Includes total college expenditures for the fiscal year ending June 30, 1984, -- including student activities expenditures, building projects, etc. -- but <u>excludes</u> the following: a. all salaries paid to employees b. all internal transfers (that are not then expended externally) c. all taxes Source: Use 1983-84 fiscal year audit **or** Fiscal Year 1984 HEGIS Financial Report, line for "total current fund operating expenditures and mandatory transfers," <u>minus</u> exclusions listed above, and add expenditures for building projects, capital, etc.
2. Percentage of college expenditures spent -- a. in county: _____ % b. in service area: _____ % c. in Kansas: _____ %	There are two methods of deriving this information from college business records: a. calculate actual total expenditures in county, in the college's service area, and in Kansas for fiscal 1983-84. b. examine three months of activity (in three different quarters) to determine average percentage spent in county/service area/Kansas. Identify expenditures by addresses of vendors.

Information Required	Directions/Source of Information
3. Number of college employees -- a. full-time: _____ b. part-time: _____ c. TOTAL: _____	Use end of 1983 calendar payroll records, W-2 submissions, or 1983-84 annual budget and data to determine all college employees during 1983 or fall semester, 1983.
4. College employees who live -- in county: a. full-time: _____ b. part-time: _____ c. TOTAL: _____ in service area: d. full-time: _____ e. part-time: _____ f. TOTAL: _____ in Kansas: g. full-time: _____ h. part-time: _____ i. TOTAL: _____	Use address information on payroll records or in college directory. If data on part-time employees are not available, assume the same percentage of part-time employees live in county, in the service area, and in Kansas as full-time employees do.
5. Total disposable income available to college employees _____	Use end of 1983 calendar year payroll records/W-2 forms to determine total money paid directly to all college employees, <u>including</u> payments/deductions for employee paid fringe benefits (i.e. health insurance, voluntary annuities, credit union deductions, etc.) but <u>excluding</u> all taxes withheld (i.e. city, state, federal, social security) and all mandatory retirement deductions (i.e. KPERS, etc.).

Information Required	Directions/Source of Information
6. Number of students -- a. full-time: _____ b. part-time: _____ c. TOTAL: _____	Use total headcount enrollment figures for the 20th day of the fall, 1983 semester. This should be available on HEGIS forms, state reports and/or internal audits. Identify both full-time and part-time students defined as follows: a. full-time students - enrolled in 12 or more credit hours b. part-time students - enrolled for less than 12 credit hours
7. Number of students who live in on-campus housing (i.e. dormitories, etc.) _____	Use housing records for the fall semester, 1983 to determine the total, unduplicated number of students who resided in on-campus housing during the fall semester.
8. Average annual college-related expenditures by full-time students _____	Use financial aid schedules for the 1983-84 academic year used to determine 9-month living allowances and book costs for a single, dependent, full-time student living at home. Exclude costs of tuition and fees.
9. Average annual college-related expenditures by part-time students _____	Use the same financial aid schedule specified in #7 above to determine the 9-month costs **only** for books, college-related supplies and transportation to and from classes for a part-time student (6 credit hours). Exclude cost of tuition and fees.

Appendix 2

KANSAS COMMUNITY COLLEGE
ECONOMIC IMPACT STUDY WORKSHEETS

KANSAS COMMUNITY COLLEGE ECONOMIC IMPACT WORK SHEET

	Data Element	Source/Formula	Allen CCC	Barton CCC	Butler CCC
1	total college expenditures	SQ#1	1,434,550.12	2,769,295.00	4,559,189.00
2	% expenditures in county	SQ#2a	18.0%	45.1%	37.2%
3	% expenditures in Kansas	SQ#2c	35.0%	65.0%	71.0%
4	TOTAL COLLEGE EXPENDITURES IN COUNTY	R1XR2	258,219.02	1,248,952.05	1,696,018.31
5	TOTAL COLLEGE EXPENDITURES IN KANSAS	R1XR3	502,092.54	1,800,041.75	3,237,024.19
6	employee's total disposable income	SQ#5	872,453.85	2,708,400.00	4,559,189.00
7	total college employees	SQ#3c	144	761	336
8	total employees in county	SQ#4c	82	362	282
9	total employees in Kansas	SQ#4i	144	715	336
10	% employees in county	R8/R7	56.9%	47.6%	83.9%
11	% employees in Kansas	R9/R7	100.0%	94.0%	100.0%
12	% non-housing expenditures (est.) for county	Table A	77.0%	77.0%	77.0%
13	% non-housing expenditures (est.) for Kansas	Table A	77.0%	77.0%	77.0%
14	% (est.) expenditures in county	Table B	59.0%	72.0%	52.0%
15	% (est.) expenditures in Kansas	Table B	59.0%	72.0%	52.2%
16	college employees' non-housing expenditures in county	R6XR10XR12XR14	225,702.60	714,265.94	1,532,115.46
17	college employees' non-housing expenditures in Kansas	R6XR11XR13XR15	396,355.78	1,410,773.88	1,831,045.98
18	total full-time employees	SQ#3a	48	186	165
19	full-time employees in county	SQ#4a	45	175	138
20	full-time employees in Kansas	SQ#4g	48	186	165
21	non-housing expenditures of full-time out-of-county employees	(R18-R19)X1,000	3,000.00	11,000.00	27,000.00
22	non-housing expenditures of full-time out-of-Kansas	(R18-R20)X1,000	0.00	0.00	0.00
23	% county residents who rent	Table C	19.8%	68.1%	22.4%
24	% Kansas residents who rent	Table C	19.8%	68.1%	22.4%
25	average county annual rent	Table C	1,464.00	1,872.00	1,776.00
26	average Kansas annual rent	Table C	1,464.00	1,872.00	1,776.00
27	rental expenditures of full-time employees in county	R19XR23XR25	13,068.88	223,005.44	54,913.85
28	rental expenditures of full-time employees in Kansas	R20XR24XR26	13,940.14	237,022.92	65,637.87
29	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN COUNTY	R16+R21+R27	241,771.48	948,271.37	1,614,029.32
30	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN KANSAS	R17+R22+R28	410,295.92	1,647,796.81	1,896,703.85
31	full-time students	SQ#6a	471	725	1023
32	part-time students	SQ#6b	720	1485	3271
33	average annual college-related expenditures of full-time student	SQ#8	2,160.00	2,250.00	2,185.00
34	average annual college-related expenditures of part-time student	SQ#9	1,000.00	1,000.00	1,000.00
35	total college-related expenditures by full-time students	R31XR33	1,017,360.00	1,631,250.00	2,235,255.00
36	total college-related expenditures by part-time students	R32XR34	720,000.00	1,485,000.00	3,271,000.00
37	TOTAL STUDENTS' EXPENDITURES	R35+R36	1,737,360.00	3,116,250.00	5,506,255.00
38					
39	Total Direct Economic Impact On County	R4+R29+R37	2,237,350.50	5,313,473.42	8,816,302.63
40	Total Direct Economic Impact On Kansas	R5+R30+R37	2,649,748.46	6,564,088.56	10,639,983.04
41	TOTAL ECONOMIC IMPACT ON COUNTY	R39X2.0	4,474,701.00	10,626,946.84	17,632,605.25
42	TOTAL ECONOMIC IMPACT ON KANSAS	R40X2.5	6,624,371.16	16,410,221.39	26,599,957.61
43					
44	Total Indirect Economic Impact On County	R41-R39	2,237,350.50	5,313,473.42	8,816,302.63
45	Total Indirect Economic Impact On Kansas	R42-R40	3,974,622.69	9,846,132.83	15,959,974.57
46					
47	Full-time jobs related to college in county	R39X.00007	156.61	371.94	617.14
48	Full-time jobs related to college in Kansas	R40X.00007	185.48	459.49	744.80
49	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN COUNTY	R19+R47	201.61	546.94	755.14
50	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN KANSAS	R20+R48	233.48	645.49	909.80
51					
52	Investment of County Taxpayers (all local taxes paid)	Table D	794,945.58	3,000,186.83	2,584,576.82
53	Investment of State (state support received)	Table D	716,622.00	1,653,751.75	2,104,999.50
54	TOTAL TAX SUPPORT	R52+R53	1,511,567.58	4,653,938.58	4,689,576.32

KANSAS COMMUNITY COLLEGE ECONOMIC IMPACT WORK SHEET

	Data Element	Source/Formula	Cloud CCC	Coffeyville CC	Colby CC
1	total college expenditures	SQ#1	1,354,266.00	1,843,031.00	1,583,374.00
2	% expenditures in county	SQ#2a	47.3%	73.0%	54.0%
3	% expenditures in Kansas	SQ#2c	86.3%	100.0%	82.0%
4	TOTAL COLLEGE EXPENDITURES IN COUNTY	R1XR2	640,567.82	1,345,412.63	855,021.96
5	TOTAL COLLEGE EXPENDITURES IN KANSAS	R1XR3	1,168,731.56	1,843,031.00	1,298,366.68
6	employee's total disposable income	SQ#5	2,069,343.00	960,696.00	2,038,545.00
7	total college employees	SQ#3c	439	123	200
8	total employees in county	SQ#4c	197	105	133
9	total employees in Kansas	SQ#4i	439	121	200
10	% employees in county	R8/R7	44.9%	85.4%	66.5%
11	% employees in Kansas	R9/R7	100.0%	98.4%	100.0%
12	% non-housing expenditures (est.) for county	Table A	77.0%	77.0%	77.0%
13	% non-housing expenditures (est.) for Kansas	Table A	77.0%	77.0%	77.0%
14	% (est.) expenditures in county	Table B	52.0%	76.0%	55.0%
15	% (est.) expenditures in Kansas	Table B	52.0%	76.0%	55.0%
16	college employees' non-housing expenditures in county	R6XR10XR12XR14	371,816.16	479,926.23	574,110.33
17	college employees' non-housing expenditures in Kansas	R6XR11XR13XR15	828,564.94	553,057.85	863,323.81
18	total full-time employees	SQ#3a	78	56	98
19	full-time employees in county	SQ#4a	69	55	97
20	full-time employees in Kansas	SQ#4g	78	55	98
21	non-housing expenditures of full-time out-of-county employees	(R18-R19)X1,000	9,000.00	1,000.00	1,000.00
22	non-housing expenditures of full-time out-of-Kansas	(R18-R20)X1,000	0.00	1,000.00	0.00
23	% county residents who rent	Table C	22.7%	22.1%	24.4%
24	% Kansas residents who rent	Table C	22.7%	22.1%	24.4%
25	average county annual rent	Table C	1,140.00	1,524.00	1,632.00
26	average Kansas annual rent	Table C	1,140.00	1,524.00	1,632.00
27	rental expenditures of full-time employees in county	R19XR23XR25	17,885.77	18,540.89	38,559.47
28	rental expenditures of full-time employees in Kansas	R20XR24XR26	20,218.69	18,540.89	38,956.99
29	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN COUNTY	R16+R21+R27	398,701.92	499,467.12	613,669.81
30	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN KANSAS	R17+R22+R28	848,783.63	572,598.74	902,280.80
31	full-time students	SQ#6a	626	535	521
32	part-time students	SQ#6b	1361	1024	933
33	average annual college-related expenditures of full-time student	SQ#8	2,000.00	1,500.00	3,200.00
34	average annual college-related expenditures of part-time student	SQ#9	1,000.00	1,000.00	1,000.00
35	total college-related expenditures by full-time students	R31XR33	1,252,000.00	802,500.00	1,667,200.00
36	total college-related expenditures by part-time students	R32XR34	1,361,000.00	1,024,000.00	933,000.00
37	TOTAL STUDENTS' EXPENDITURES	R35+R36	2,613,000.00	1,826,500.00	2,600,200.00
38					
39	Total Direct Economic Impact On County	R4+R29+R37	3,652,269.74	3,671,379.75	4,068,891.77
40	Total Direct Economic Impact On Kansas	R5+R30+R37	4,630,515.19	4,242,129.74	4,800,847.48
41	TOTAL ECONOMIC IMPACT ON COUNTY	R39X2.0	7,304,539.49	7,342,759.51	8,137,783.53
42	TOTAL ECONOMIC IMPACT ON KANSAS	R40X2.5	11,576,287.98	10,605,324.35	12,002,118.70
43					
44	Total Indirect Economic Impact On County	R41-R39	3,652,269.74	3,671,379.75	4,068,891.77
45	Total Indirect Economic Impact On Kansas	R42-R40	6,945,772.79	6,363,194.61	7,201,271.22
46					
47	Full-time jobs related to college in county	R39X.00007	255.66	257.00	284.82
48	Full-time jobs related to college in Kansas	R40X.00007	324.14	296.95	336.06
49	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN COUNTY	R19+R47	324.66	312.00	381.82
50	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN KANSAS	R20+R48	402.14	351.95	434.06
51					
52	Investment of County Taxpayers (all local taxes paid)	Table D	920,183.19	1,625,306.96	1,258,395.51
53	Investment of State (state support received)	Table D	1,262,164.00	675,942.50	1,024,908.25
54	TOTAL TAX SUPPORT	R52+R53	2,182,347.19	2,301,249.46	2,283,303.76

KANSAS COMMUNITY COLLEGE ECONOMIC IMPACT WORK SHEET

	Data Element	Source/Formula	Cowley CCC	Dodge City CC	Fort Scott CC
1	total college expenditures	SQ#1	2,559,610.00	2,878,408.00	1,865,987.79
2	% expenditures in county	SQ#2a	38.0%	87.0%	76.0%
3	% expenditures in Kansas	SQ#2c	76.0%	98.0%	98.0%
4	TOTAL COLLEGE EXPENDITURES IN COUNTY	R1XR2	972,139.88	2,504,214.96	1,418,150.72
5	TOTAL COLLEGE EXPENDITURES IN KANSAS	R1XR3	1,945,815.52	2,820,839.84	1,828,668.03
6	employee's total disposable income	SQ#5	1,609,759.00	2,083,468.00	1,600,903.56
7	total college employees	SQ#3c	169	600	150
8	total employees in county	SQ#4c	90	497	123
9	total employees in Kansas	SQ#4i	169	600	150
10	% employees in county	R8/R7	53.3%	82.8%	82.0%
11	% employees in Kansas	R9/R7	100.0%	100.0%	100.0%
12	% non-housing expenditures (est.) for county	Table A	77.0%	77.0%	77.0%
13	% non-housing expenditures (est.) for Kansas	Table A	77.0%	77.0%	77.0%
14	% (est.) expenditures in county	Table B	61.0%	84.0%	65.0%
15	% (est.) expenditures in Kansas	Table B	61.0%	84.0%	65.0%
16	college employees' non-housing expenditures in county	R6XR10XR12XR14	402,658.83	1,116,251.32	657,127.91
17	college employees' non-housing expenditures in Kansas	R6XR11XR13XR15	756,103.80	1,347,587.10	801,375.50
18	total full-time employees	SQ#3a	79	121	71
19	full-time employees in county	SQ#4a	72	117	71
20	full-time employees in Kansas	SQ#4g	79	121	71
21	non-housing expenditures of full-time out-of-county employees	(R18-R19)X1,000	7,000.00	4,000.00	0.00
22	non-housing expenditures of full-time out-of-Kansas	(R18-R20)X1,000	0.00	0.00	0.00
23	% county residents who rent	Table C	26.0%	26.4%	24.6%
24	% Kansas residents who rent	Table C	26.0%	26.4%	24.6%
25	average county annual rent	Table C	1,560.00	1,848.00	1,344.00
26	average Kansas annual rent	Table C	1,560.00	1,848.00	1,344.00
27	rental expenditures of full-time employees in county	R19XR23XR25	29,184.40	56,998.79	23,302.25
28	rental expenditures of full-time employees in Kansas	R20XR24XR26	32,021.77	58,947.47	23,302.25
29	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN COUNTY	R16+R21+R27	438,843.23	1,177,250.11	680,630.16
30	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN KANSAS	R17+R22+R28	788,125.57	1,406,534.57	824,877.75
31	full-time students	SQ#6a	637	727	587
32	part-time students	SQ#6b	1289	652	701
33	average annual college-related expenditures of full-time student	SQ#8	2,000.00	1,000.00	3,250.00
34	average annual college-related expenditures of part-time student	SQ#9	1,000.00	2,200.00	1,000.00
35	total college-related expenditures by full-time students	R31XR33	1,274,000.00	727,000.00	1,907,750.00
36	total college-related expenditures by part-time students	R32XR34	1,289,000.00	1,434,400.00	701,000.00
37	TOTAL STUDENTS' EXPENDITURES	R35+R36	2,563,000.00	2,161,400.00	2,608,750.00
38					
39	Total Direct Economic Impact On County	R4+R29+R37	3,973,983.10	5,842,865.07	4,707,530.88
40	Total Direct Economic Impact On Kansas	R5+R30+R37	5,296,941.09	6,388,774.41	5,262,295.79
41	TOTAL ECONOMIC IMPACT ON COUNTY	R39X2.0	7,947,966.21	11,685,730.13	9,415,061.77
42	TOTAL ECONOMIC IMPACT ON KANSAS	R40X2.5	13,242,352.73	15,971,936.02	13,155,739.47
43					
44	Total Indirect Economic Impact On County	R41-R39	3,973,983.10	5,842,865.07	4,707,530.88
45	Total Indirect Economic Impact On Kansas	R42-R40	7,945,411.64	9,583,161.61	7,893,443.68
46					
47	Full-time jobs related to college in county	R39X.00007	278.18	409.00	329.53
48	Full-time jobs related to college in Kansas	R40X.00007	370.79	447.21	368.36
49	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN COUNTY	R19+R47	350.18	526.00	400.53
50	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN KANSAS	R20+R48	449.79	568.21	439.36
51					
52	Investment of County Taxpayers (all local taxes paid)	Table D	2,082,538.00	3,367,677.59	1,093,104.60
53	Investment of State (state support received)	Table D	1,008,397.50	1,063,578.50	723,638.00
54	TOTAL TAX SUPPORT	R52+R53	3,090,935.50	4,431,256.09	1,816,742.60

KANSAS COMMUNITY COLLEGE ECONOMIC IMPACT WORK SHEET

	Data Element	Source/Formula	Garden City CC	Highland CC	Hutchinson CC
1	total college expenditures	SQ#1	3,247,620.00	1,708,354.00	4,167,066.36
2	% expenditures in county	SQ#2a	31.0%	14.0%	60.5%
3	% expenditures in Kansas	SQ#2c	60.0%	51.0%	68.7%
4	TOTAL COLLEGE EXPENDITURES IN COUNTY	R1XR2	1,006,762.20	239,169.56	2,519,408.44
5	TOTAL COLLEGE EXPENDITURES IN KANSAS	R1XR3	1,948,572.00	871,260.54	2,862,358.02
6	employee's total disposable income	SQ#5	2,770,536.00	886,650.00	4,089,856.52
7	total college employees	SQ#3c	227	246	480
8	total employees in county	SQ#4c	165	76	350
9	total employees in Kansas	SQ#4i	227	244	480
10	% employees in county	R8/R7	72.7%	30.9%	72.9%
11	% employees in Kansas	R9/R7	100.0%	99.2%	100.0%
12	% non-housing expenditures (est.) for county	Table A	77.0%	77.0%	77.0%
13	% non-housing expenditures (est.) for Kansas	Table A	77.0%	77.0%	77.0%
14	% (est.) expenditures in county	Table B	66.0%	66.0%	74.0%
15	% (est.) expenditures in Kansas	Table B	66.0%	66.0%	74.0%
16	college employees' non-housing expenditures in county	R6XR10XR12XR14	1,023,426.23	139,208.38	1,699,250.18
17	college employees' non-housing expenditures in Kansas	R6XR11XR13XR15	1,407,986.40	446,932.15	2,330,400.25
18	total full-time employees	SQ#3a	121	54	214
19	full-time employees in county	SQ#4a	119	47	201
20	full-time employees in Kansas	SQ#4g	121	53	214
21	non-housing expenditures of full-time out-of-county employees	(R18-R19)X1,000	2,000.00	7,000.00	13,000.00
22	non-housing expenditures of full-time out-of-Kansas	(R18-R20)X1,000	0.00	1,000.00	0.00
23	% county residents who rent	Table C	27.1%	21.2%	25.1%
24	% Kansas residents who rent	Table C	27.1%	21.2%	25.1%
25	average county annual rent	Table C	2,160.00	1,248.00	1,944.00
26	average Kansas annual rent	Table C	2,160.00	1,248.00	1,944.00
27	rental expenditures of full-time employees in county	R19XR23XR25	69,565.87	12,412.74	97,969.64
28	rental expenditures of full-time employees in Kansas	R20XR24XR26	70,735.05	13,997.35	104,305.98
29	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN COUNTY	R16+R21+R27	1,094,992.11	158,621.12	1,810,219.82
30	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN KANSAS	R17+R22+R28	1,478,721.44	461,929.50	2,434,706.23
31	full-time students	SQ#6a	696	363	1284
32	part-time students	SQ#6b	574	903	2253
33	average annual college-related expenditures of full-time student	SQ#8	2,598.00	2,800.00	2,978.00
34	average annual college-related expenditures of part-time student	SQ#9	1,000.00	1,000.00	1,000.00
35	total college-related expenditures by full-time students	R31XR33	1,808,208.00	1,016,400.00	3,823,752.00
36	total college-related expenditures by part-time students	R32XR34	574,000.00	903,000.00	2,253,000.00
37	TOTAL STUDENTS' EXPENDITURES	R35+R36	2,382,208.00	1,919,400.00	6,076,752.00
38					
39	Total Direct Economic Impact On County	R4+R29+R37	4,483,962.31	2,317,190.68	10,406,380.26
40	Total Direct Economic Impact On Kansas	R5+R30+R37	5,809,501.44	3,252,590.04	11,373,816.25
41	TOTAL ECONOMIC IMPACT ON COUNTY	R39X2.0	8,967,924.61	4,634,381.36	20,812,760.52
42	TOTAL ECONOMIC IMPACT ON KANSAS	R40X2.5	14,523,753.60	8,131,475.10	28,434,540.62
43					
44	Total Indirect Economic Impact On County	R41-R39	4,483,962.31	2,317,190.68	10,406,380.26
45	Total Indirect Economic Impact On Kansas	R42-R40	8,714,252.16	4,878,885.06	17,060,724.37
46					
47	Full-time jobs related to college in county	R39X.00007	313.88	162.20	728.45
48	Full-time jobs related to college in Kansas	R40X.00007	406.67	227.68	796.17
49	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN COUNTY	R19+R47	432.88	209.20	929.45
50	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN KANSAS	R20+R48	527.67	280.68	1,010.17
51					
52	Investment of County Taxpayers (all local taxes paid)	Table D	3,214,613.36	987,704.06	4,293,253.67
53	Investment of State (state support received)	Table D	901,473.00	766,288.50	1,778,983.75
54	TOTAL TAX SUPPORT	R52+R53	4,116,086.36	1,753,992.56	6,072,237.42

KANSAS COMMUNITY COLLEGE ECONOMIC IMPACT WORK SHEET

	Data Element	Source/Formula	Independence CC	Johnson CCC	Kansas City CC
1	total college expenditures	SQ#1	1,822,983.55	14,274,813.00	4,432,364.00
2	% expenditures in county	SQ#2a	30.0%	37.6%	53.0%
3	% expenditures in Kansas	SQ#2c	65.0%	45.1%	74.0%
4	TOTAL COLLEGE EXPENDITURES IN COUNTY	R1XR2	546,895.07	5,367,329.69	2,349,152.92
5	TOTAL COLLEGE EXPENDITURES IN KANSAS	R1XR3	1,184,939.31	6,437,940.66	3,279,949.36
6	employee's total disposable income	SQ#5	1,845,890.52	8,749,572.03	5,057,045.00
7	total college employees	SQ#3c	376	1700	812
8	total employees in county	SQ#4c	334	1267	681
9	total employees in Kansas	SQ#4i	374	1454	766
10	% employees in county	R8/R7	88.8%	74.5%	83.9%
11	% employees in Kansas	R9/R7	99.5%	85.5%	94.3%
12	% non-housing expenditures (est.) for county	Table A	77.0%	79.0%	79.0%
13	% non-housing expenditures (est.) for Kansas	Table A	77.0%	79.0%	79.0%
14	% (est.) expenditures in county	Table B	76.0%	53.0%	59.0%
15	% (est.) expenditures in Kansas	Table B	76.0%	53.0%	59.0%
16	college employees' non-housing expenditures in county	R6XR10XR12XR14	959,552.80	2,730,344.61	1,976,819.44
17	college employees' non-housing expenditures in Kansas	R6XR11XR13XR15	1,074,469.31	3,133,323.65	2,223,559.02
18	total full-time employees	SQ#3a	84	436	242
19	full-time employees in county	SQ#4a	78	325	177
20	full-time employees in Kansas	SQ#4g	82	373	225
21	non-housing expenditures of full-time out-of-county employees	(R18-R19)X1,000	6,000.00	111,000.00	65,000.00
22	non-housing expenditures of full-time out-of-Kansas	(R18-R20)X1,000	2,000.00	63,000.00	17,000.00
23	% county residents who rent	Table C	22.1%	24.7%	32.0%
24	% Kansas residents who rent	Table C	22.1%	24.7%	32.0%
25	average county annual rent	Table C	1,524.00	3,312.00	1,848.00
26	average Kansas annual rent	Table C	1,524.00	3,312.00	1,848.00
27	rental expenditures of full-time employees in county	R19XR23XR25	26,294.36	265,550.63	104,731.54
28	rental expenditures of full-time employees in Kansas	R20XR24XR26	27,642.79	304,770.41	133,133.32
29	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN COUNTY	R16+R21+R27	991,847.16	3,106,895.24	2,146,550.99
30	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN KANSAS	R17+R22+R28	1,104,112.09	3,501,094.06	2,373,692.34
31	full-time students	SQ#6a	364	2392	1476
32	part-time students	SQ#6b	563	5714	2656
33	average annual college-related expenditures of full-time student	SQ#8	3,290.00	2,454.00	2,810.00
34	average annual college-related expenditures of part-time student	SQ#9	1,000.00	750.00	750.00
35	total college-related expenditures by full-time students	R31XR33	1,197,560.00	5,869,968.00	4,147,560.00
36	total college-related expenditures by part-time students	R32XR34	563,000.00	4,285,500.00	1,992,000.00
37	TOTAL STUDENTS' EXPENDITURES	R35+R36	1,760,560.00	10,155,468.00	6,139,560.00
38					
39	Total Direct Economic Impact On County	R4+R29+R37	3,299,302.23	18,629,692.93	10,635,263.91
40	Total Direct Economic Impact On Kansas	R5+R30+R37	4,049,611.60	20,094,502.73	11,793,201.70
41	TOTAL ECONOMIC IMPACT ON COUNTY	R39X2.0	6,598,604.45	37,259,385.86	21,270,527.81
42	TOTAL ECONOMIC IMPACT ON KANSAS	R40X2.5	10,124,028.50	50,236,256.82	29,483,004.25
43					
44	Total Indirect Economic Impact On County	R41-R39	3,299,302.23	18,629,692.93	10,635,263.91
45	Total Indirect Economic Impact On Kansas	R42-R40	6,074,417.10	30,141,754.09	17,689,802.55
46					
47	Full-time jobs related to college in county	R39X.00007	230.95	1,304.08	744.47
48	Full-time jobs related to college in Kansas	R40X.00007	283.47	1,406.62	825.52
49	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN COUNTY	R19+R47	308.95	1,629.08	921.47
50	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN KANSAS	R20+R48	365.47	1,779.62	1,050.52
51					
52	Investment of County Taxpayers (all local taxes paid)	Table D	1,686,327.54	13,528,055.28	4,495,506.86
53	Investment of State (state support received)	Table D	515,056.50	3,900,012.07	2,207,869.83
54	TOTAL TAX SUPPORT	R52+R53	2,201,384.04	17,428,067.35	6,703,376.69

KANSAS COMMUNITY COLLEGE ECONOMIC IMPACT WORK SHEET

	Data Element	Source/Formula	Labette CC	Neosho CCC	Pratt CC
1	total college expenditures	SQ#1	1,530,997.12	1,248,505.00	3,872,367.46
2	% expenditures in county	SQ#2a	58.0%	69.0%	64.0%
3	% expenditures in Kansas	SQ#2c	63.0%	83.0%	82.0%
4	TOTAL COLLEGE EXPENDITURES IN COUNTY	R1XR2	887,978.33	861,468.45	2,478,315.17
5	TOTAL COLLEGE EXPENDITURES IN KANSAS	R1XR3	964,528.19	1,036,259.15	3,175,341.32
6	employee's total disposable income	SQ#5	1,581,260.00	1,352,081.00	1,183,500.84
7	total college employees	SQ#3c	239	209	200
8	total employees in county	SQ#4c	144	139	148
9	total employees in Kansas	SQ#41	237	209	200
10	% employees in county	R8/R7	60.3%	66.5%	74.0%
11	% employees in Kansas	R9/R7	99.2%	100.0%	100.0%
12	% non-housing expenditures (est.) for county	Table A	77.0%	77.0%	77.0%
13	% non-housing expenditures (est.) for Kansas	Table A	77.0%	77.0%	77.0%
14	% (est.) expenditures in county	Table B	53.0%	65.0%	74.0%
15	% (est.) expenditures in Kansas	Table B	53.0%	65.0%	74.0%
16	college employees' non-housing expenditures in county	R6XR10XR12XR14	388,807.35	450,065.07	499,025.50
17	college employees' non-housing expenditures in Kansas	R6XR11XR13XR15	639,912.10	676,716.54	674,358.78
18	total full-time employees	SQ#3a	92	58	74
19	full-time employees in county	SQ#4a	85	49	66
20	full-time employees in Kansas	SQ#4g	91	58	74
21	non-housing expenditures of full-time out-of-county employees	(R18-R19)X1,000	7,000.00	9,000.00	8,000.00
22	non-housing expenditures of full-time out-of-Kansas	(R18-R20)X1,000	1,000.00	0.00	0.00
23	% county residents who rent	Table C	21.6%	21.5%	23.9%
24	% Kansas residents who rent	Table C	21.6%	21.5%	23.9%
25	average county annual rent	Table C	1,320.00	1,440.00	1,800.00
26	average Kansas annual rent	Table C	1,320.00	1,440.00	1,800.00
27	rental expenditures of full-time employees in county	R19XR23XR25	24,272.05	15,146.90	28,345.73
28	rental expenditures of full-time employees in Kansas	R20XR24XR26	25,985.37	17,928.99	31,781.38
29	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN COUNTY	R16+R21+R27	420,079.41	474,211.97	535,371.23
30	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN KANSAS	R17+R22+R28	666,897.48	694,645.53	706,140.26
31	full-time students	SQ#6a	710	286	469
32	part-time students	SQ#6b	1616	743	1858
33	average annual college-related expenditures of full-time student	SQ#8	3,260.00	2,200.00	2,740.00
34	average annual college-related expenditures of part-time student	SQ#9	1,000.00	1,000.00	1,000.00
35	total college-related expenditures by full-time students	R31XR33	2,314,600.00	629,200.00	1,285,060.00
36	total college-related expenditures by part-time students	R32XR34	1,616,000.00	743,000.00	1,858,000.00
37	TOTAL STUDENTS' EXPENDITURES	R35+R36	3,930,600.00	1,372,200.00	3,143,060.00
38					
39	Total Direct Economic Impact On County	R4+R29+R37	5,238,657.74	2,707,880.42	6,156,746.40
40	Total Direct Economic Impact On Kansas	R5+R30+R37	5,562,025.66	3,103,104.68	7,024,341.68
41	TOTAL ECONOMIC IMPACT ON COUNTY	R39X2.0	10,477,315.47	5,415,760.84	12,313,492.81
42	TOTAL ECONOMIC IMPACT ON KANSAS	R40X2.5	13,905,064.16	7,757,761.70	17,561,354.19
43					
44	Total Indirect Economic Impact On County	R41-R39	5,238,657.74	2,707,880.42	6,156,746.40
45	Total Indirect Economic Impact On Kansas	R42-R40	8,343,038.50	4,654,657.02	10,536,812.51
46					
47	Full-time jobs related to college in county	R39X.00007	366.71	189.55	430.97
48	Full-time jobs related to college in Kansas	R40X.00007	389.34	217.22	491.72
49	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN COUNTY	R19+R47	451.71	238.55	496.97
50	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN KANSAS	R20+R48	480.34	275.22	565.72
51					
52	Investment of County Taxpayers (all local taxes paid)	Table D	1,503,740.13	1,238,946.44	1,516,870.03
53	Investment of State (state support received)	Table D	1,252,404.25	584,493.75	792,255.00
54	TOTAL TAX SUPPORT	R52+R53	2,756,144.38	1,823,440.19	2,309,125.03

KANSAS COMMUNITY COLLEGE ECONOMIC IMPACT WORK SHEET

	Data Element	Source/Formula	Seward CCC	Sum	Mean
1	total college expenditures	SQ#1	1,573,593.00	58,726,374.60	3,090,861.82
2	% expenditures in county	SQ#2a	85.0%	977.6%	51.5%
3	% expenditures in Kansas	SQ#2c	97.0%	1,400.1%	73.7%
4	TOTAL COLLEGE EXPENDITURES IN COUNTY	R1XR2	1,337,554.05	28,532,731.22	1,501,722.70
5	TOTAL COLLEGE EXPENDITURES IN KANSAS	R1XR3	1,526,385.21	39,732,144.87	2,091,165.52
6	employee's total disposable income	SQ#5	1,447,239.00	47,466,388.32	2,498,230.96
7	total college employees	SQ#3c	191	7,602.00	400.11
8	total employees in county	SQ#4c	109	5,284.00	278.11
9	total employees in Kansas	SQ#4i	180	7,245.00	381.32
10	% employees in county	R8/R7	57.1%	1,284.8%	67.6%
11	% employees in Kansas	R9/R7	94.2%	1,864.3%	98.1%
12	% non-housing expenditures (est.) for county	Table A	77.0%	1,467.0%	77.2%
13	% non-housing expenditures (est.) for Kansas	Table A	77.0%	1,467.0%	77.2%
14	% (est.) expenditures in county	Table B	75.0%	1,237.0%	65.1%
15	% (est.) expenditures in Kansas	Table B	75.0%	1,237.2%	65.1%
16	college employees' non-housing expenditures in county	R6XR10XR12XR14	476,963.75	16,417,438.10	864,075.69
17	college employees' non-housing expenditures in Kansas	R6XR11XR13XR15	787,646.57	22,183,493.41	1,167,552.28
18	total full-time employees	SQ#3a	75	2,352.00	123.79
19	full-time employees in county	SQ#4a	68	2,054.00	108.11
20	full-time employees in Kansas	SQ#4g	70	2,262.00	119.05
21	non-housing expenditures of full-time out-of-county employees	(R18-R19)X1,000	7,000.00	298,000.00	15,684.21
22	non-housing expenditures of full-time out-of-Kansas	(R18-R20)X1,000	5,000.00	90,000.00	4,736.84
23	% county residents who rent	Table C	29.1%	504.7%	26.6%
24	% Kansas residents who rent	Table C	29.1%	504.7%	26.6%
25	average county annual rent	Table C	2,244.00	33,000.00	1,736.84
26	average Kansas annual rent	Table C	2,244.00	33,000.00	1,736.84
27	rental expenditures of full-time employees in county	R19XR23XR25	44,386.25	1,164,335.47	61,280.81
28	rental expenditures of full-time employees in Kansas	R20XR24XR26	45,691.73	1,284,781.57	67,620.08
29	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN COUNTY	R16+R21+R27	528,350.01	17,879,773.57	941,040.71
30	TOTAL COLLEGE EMPLOYEES' EXPENDITURES IN KANSAS	R17+R22+R28	838,338.30	23,558,274.98	1,239,909.21
31	full-time students	SQ#6a	340	14,232.00	749.05
32	part-time students	SQ#6b	1527	29,843.00	1,570.68
33	average annual college-related expenditures of full-time student	SQ#8	3,380.00	48,055.00	2,529.21
34	average annual college-related expenditures of part-time student	SQ#9	1,000.00	19,700.00	1,036.84
35	total college-related expenditures by full-time students	R31XR33	1,149,200.00	35,755,823.00	1,881,885.42
36	total college-related expenditures by part-time students	R32XR34	1,527,000.00	28,532,900.00	1,501,731.58
37	TOTAL STUDENTS' EXPENDITURES	R35+R36	2,676,200.00	64,288,723.00	3,383,617.00
38					
39	Total Direct Economic Impact On County	R4+R29+R37	4,542,104.06	110,701,227.79	5,826,380.41
40	Total Direct Economic Impact On Kansas	R5+R30+R37	5,040,923.51	127,579,142.85	6,714,691.73
41	TOTAL ECONOMIC IMPACT ON COUNTY	R39X2.0	9,084,208.11	221,402,455.58	11,652,760.82
42	TOTAL ECONOMIC IMPACT ON KANSAS	R40X2.5	12,602,308.77	318,947,857.12	16,786,729.32
43					
44	Total Indirect Economic Impact On County	R41-R39	4,542,104.06	110,701,227.79	5,826,380.41
45	Total Indirect Economic Impact On Kansas	R42-R40	7,561,385.26	191,368,714.27	10,072,037.59
46					
47	Full-time jobs related to college in county	R39X.00007	317.95	7,749.09	407.85
48	Full-time jobs related to college in Kansas	R40X.00007	352.86	8,930.54	470.03
49	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN COUNTY	R19+R47	385.95	9,803.09	515.95
50	TOTAL FULL-TIME EMPLOYMENT RELATED TO COLLEGE IN KANSAS	R20+R48	422.86	11,192.54	589.08
51					
52	Investment of County Taxpayers (all local taxes paid)	Table D	2,202,559.05	51,394,491.52	2,704,973.24
53	Investment of State (state support received)	Table D	493,040.00	23,425,878.65	1,232,940.98
54	TOTAL TAX SUPPORT	R52+R53	2,695,599.05	74,820,370.17	3,937,914.22

Appendix 3

Table A

ESTIMATES OF NON-HOUSING EXPENDITURES
FOR SELECTED COUNTIES IN KANSAS

Metropolitan Area/Region	Family Consumption, Intermediate Budget: Average Total Consumption	Average Shelter Costs	Average Percent Non-Housing Expenditures
Kansas City, SMSA (includes Johnson and Wyandotte counties)	$17,822	$3,765	78.9%
North Central region, non-metropolitan areas (includes all other Kansas counties with community colleges)	16,969	3,870	77.2

Source: Bureau of Labor Statistics, United States Department of Labor. "Autumn 1981 Urban Family Budgets and Comparative Indexes for Selected Urban Areas." April 16, 1982.

Table B

ESTIMATES OF PERCENTAGE OF IN-COUNTY EXPENDITURES
MADE BY COUNTY RESIDENTS FOR SELECTED KANSAS COUNTIES

County[1]	Retail Sales,[2] 1977	Effective Buying[2] Income, 1977	Percentage of In-County[3] Expeditures
Allen	$ 43,700	$ 73,517	59.44%
Barton	151,249	210,299	71.92
Butler	124,662	241,704	51.58
Cloud	41,784	69,110	60.46
Montgomery	167,135	219,568	76.12
Thomas	35,939	65,456	54.91
Cowley	117,542	192,077	61.20
Ford	115,836	138,255	83.78
Bourbon	57,109	87,849	65.01
Finney	96,845	147,863	65.50
Doniphan	12,799	45,569	28.09
Reno	267,832	362,879	73.81
Montgomery	167,135	219,568	76.12
Johnson	1,100,169	2,073,724	53.05
Wyandotte	626,498	1,065,407	58.80
Labette	70,880	133,226	53.20
Neosho	60,960	94,474	64.53
Pratt	46,182	62,187	74.26
Seward	98,134	130,032	75.47

Notes:
1. In alphabetic order of community college located in county.
2. In thousands of dollars.
3. As suggested by KDED, the proportion of retail sales to effective buying income is a measure that can be used to estimate percentage of in-county expenditures of county residents.

Source: Kansas Department of Economic Development. "KDED Research Memorandum: Retail Trade as an Economic Base." October 1978.

Table C

SELECTED HOUSING CHARACTERISTICS FOR KANSAS BY COUNTY

Counties[1]	Percentage Renter Occupied Housing Units	Annual Median Rent
Allen	19.8%	$1,464
Barton	68.1	1,872
Butler	22.4	1,776
Cloud	22.7	1,140
Montgomery	22.1	1,524
Thomas	24.4	1,632
Cowley	26.0	1,560
Ford	26.4	1,848
Bourbon	24.6	1,344
Finney	27.1	2,160
Doniphan	21.2	1,248
Reno	25.1	1,944
Montgomery	22.1	1,524
Johnson	24.7	3,312
Wyandotte	32.0	1,848
Labette	21.6	1,320
Neosho	21.5	1,440
Pratt	23.9	1,800
Seward	29.1	2,244

Notes: 1. In alphabetic order of community colleges located in county.

Source: Center for Public Affairs, The University of Kansas Kansas Statistical Abstract 1982-83, pp.64-66.

Table D

LOCAL AND STATE TAX SUPPORT RECEIVED
BY KANSAS COMMUNITY COLLEGES, FISCAL 1983-84

Community College/ County Located	Total Local Taxes Received	Total State Taxes Received	Total Tax Support
Allen CCC/Allen	$ 794,946	$ 716,622	$ 1,511,568
Barton CCC/Barton	3,000,187	1,653,752	4,653,939
Butler CCC/Butler	2,584,577	2,105,000	4,689,576
Cloud CCC/Cloud	920,183	1,262,164	2,182,347
Coffeyville CC/Montgomery	1,625,307	675,943	2,301,249
Colby CC/Thomas	1,258,396	1,024,908	2,283,304
Cowley CCC/Cowley	2,082,538	1,008,398	3,090,936
Dodge City CC/Ford	3,367,678	1,063,579	4,431,256
Fort Scott CC/Bourbon	1,093,105	723,638	1,816,743
Garden City CC/Finney	3,214,613	901,473	4,116,086
Highland CC/Doniphan	987,704	766,289	1,753,993
Hutchinson CC/Reno	4,293,254	1,778,984	6,072,237
Independence CC/Montgomer	1,686,328	515,057	2,201,384
Johnson CCC/Johnson	13,528,055	3,900,012	17,428,067
Kansas City CC/Wyandotte	4,495,507	2,207,870	6,703,377
Labette CC/Labette	1,503,740	1,252,404	2,756,144
Neosho CCC/Neosho	1,238,946	584,494	1,823,440
Pratt CC/Pratt	1,516,870	792,255	2,309,125
Seward CCC/Seward	2,202,559	493,040	2,695,599
TOTAL	$51,394,492	$23,425,879	$74,820,370

Source: State Department of Education

Appendix 4

ANNOTATED BIBLIOGRAPHY

Caffrey, John and Isaacs, Herbert. Estimating the Impact of a College or University on the Local Economy. Washington, D.C.: American Council on Education, 1971.

This is the standard resource document for conducting economic impact studies of institutions of higher education. The work contains discussion of the issues involved in assessing economic impact and a detailed description of its comprehensive, and rather complex, model for calculating economic impact.

Illinois Community College Board. Handbook for Conducting a Study of the Economic Impact of a Community College, revised ed. Springfield, Illinois: Illinois Community College Board, 1981.

As the title suggests, this is a description of the model and procedures for conducting an economic impact study for a community college. This is an adaptation of the Caffrey and Isaacs model for community colleges, and it retains much of the complexity of the original model.

Ryan, G. Jeremiah. Economic Impact Studies in Community Colleges: A Fellowship Project for the League for Innovation in the Community College. Laguna Hills, California: The League for Innovation in the Community College, 1984.

Ryan, G. Jeremiah. The Direct Economic Impact of Brookdale Community College. Lincroft, N.J.: Brookdale Community College, 1983a.

Ryan, G. Jeremiah. Handbook for Conducting a Study of the Economic Impact of a Community College. Lincroft, N.J.: Brookdale Community College, 1983b.

Ryan, G. Jeremiah. A Study of the Economic Impact of the Community Colleges on the State of New Jersey. Lincroft, N.J.: Brookdale Community College, 1983c.

These are the resource materials that describe what has been referred to as the Ryan-New Jersey model and that forms the basis of this study. The Fellowship Project (1984) contains an overview of economic impact studies and a comprehensive bibliography of such efforts. The Handbook (1983b) provided the how-to instructions necessary to conduct this study, and the two applications of this model, one concerning Brookdale Community College (1983a) and the other the New Jersey community colleges (1983c) provided very useful illustrations of the model.

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FOR JUNIOR COLLEGES
DEC 20 1985